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Statutory Instrument No. of 2012

ENVIRONMENTAL ASSESSMENT ACT, 2011
(Act No. 10 of 2011)

ENVIRONMENTAL ASSESSMENT REGULATIONS, 2012
(Published on , 2012)

ARRANGEMENT OF REGULATIONS

REGULATION

Part I - Preliminary

Part II – Project Brief, Terms of Reference, etc

Part III - Registration and Certification of Practitioners

Part IV – General

IN EXERCISE of the powers conferred on the Minister of Environment, Wildlife and Tourism by section 73 of the Environmental Assessment Act, 2011, the following Regulations are hereby made –

Part I - Preliminary

Citation

1. These Regulations may be cited as the Environmental Assessment Regulations, 2012.

Interpretation

2. In these Regulations, unless the context otherwise requires "mass media" includes publicly exhibited posters, newspapers, radio, television or other electronic media used for public communication.

Activities to which Act applies

3. Subject to section 3 of the Act, activities, locations, thresholds and criteria to which the Act applies shall be as set out in Schedule 1 to these Regulations.

Part II – Project Brief, Terms of Reference, etc

Project brief

4. An application for a project brief referred to in section 6(2) of the Act shall be in accordance with Form A set out in Schedule 2 to these Regulations, and shall be accompanied by a fee specified in Schedule 3 to these Regulations.

Environmental management plan

5. The environmental management plan referred to in section 6(5) of the Act shall be in accordance with Form B set out in Schedule 2 to these Regulations.

Scoping exercise and report

6. The scoping exercise referred to in section 7 as read with sections 8(2) and 73(d) of the Act, shall be in accordance with Form C set out in Schedule 2 to these Regulations.

Terms of reference

7. The terms of reference referred to in section 8(1) of the Act shall be in accordance with Form D set out in Schedule 2 to these Regulations.

Environmental impact statement

8. The environmental impact statement referred to in section 9 of the Act shall be in accordance with Form E set out in Schedule 2 to the Regulations.

Public hearing

9. (1) The competent authority shall, in conducting a public hearing referred to in section 11 of the Act, invite comments from the public.

(2) The public hearing shall be conducted by a presiding officer who shall be appointed by the competent authority.

(3) The public hearing shall be convened at a venue which is convenient and accessible to persons who are likely to be specifically affected by the proposed activity.

(4) The date and venue of the public hearing shall be advertised through the mass media for public attention.

(5) The presiding officer may disallow frivolous and vexatious submissions likely to lead to abuse of the public hearing.

(6) A person applying for authorisation to undertake an activity whose application is the subject of a public hearing shall be given an opportunity to respond to any submission made at the public hearing and to provide further information relating to the activity.

(7) Upon conclusion of the public hearing, the presiding officer shall compile a report of the public hearing and submit the report to the competent authority within 10 working days from the date of the public hearing.

Part III- Registration and Certification of Practitioners

Application for registration

10. (1) An application for registration as a practitioner shall be in Form A set out in Schedule 4 to these Regulations.

(2) A person who applies to be registered as a practitioner in accordance with these Regulations shall comply with the qualification requirements and certification criteria in Form B set out in Schedule 4 to these Regulations.

(3) An application under this regulation shall be accompanied by a registration fee as specified in Form C set out in Schedule 4 to these Regulations.

Certificate of practice

11. A certificate of practice referred to in section 40 of the Act shall be in accordance with Form D set out in Schedule 4 to these Regulations and shall be issued subject to payment of a fee specified in Form C set out in Schedule 4 to these Regulations.

Register for practitioners

12. A register for practitioners kept by the Board referred to in section 38 of the Act shall be in accordance with Form E set out in Schedule 4 to these Regulations.

Part IV – General

Compliance with Code of Conduct

13. (1) A practitioner registered under these Regulations shall comply with the Code of Conduct of Practitioners in Form F set out in Schedule 4 to these Regulations.

(2) The Board may suspend the registration of a practitioner who fails to comply with the Code of Conduct.

Restoration into register

14. A practitioner whose name has been removed from the register, who wishes to have his or her name restored into the register, may apply to the Board in writing, to be restored into the register.

Republic of Botswana
Ministry of Environment Wildlife & Tourism

Department of Environmental Affairs

Telephone: (267) 3902050
Fax: (267) 3902051/ 3914687
Email: envirobotswana@gov.bw

Private Bag 0068
Gaborone
Botswana

All Correspondence to be addressed to the Director

SCHEDULE 1

(regulation3)

LIST OF ACTIVITIES, LOCATIONS AND THRESHOLDS FOR WHICH AN ENVIRONMENTAL STATEMENT IS REQUIRED

1. Environmentally sensitive areas –

   any development in national parks, game reserves, wildlife management areas, wetlands, within 1 kilometre of open surface water, flood plains, important breeding areas for fauna, within 2 kilometres of important archaeological, historical, religious or cultural sites, areas protected under legislation, hilly areas and areas containing rare or endangered flora and fauna.

2. Transboundary projects -

   All projects that have transboundary impacts such as fences, bridges, water transfer schemes and power plants and power lines.

3. Extractive and associated industry -

   (a) prospecting and exploration for oil, coal bed methane, and natural gas, heavy metals and radioactive minerals;
   (b) operations for the extraction of pit sand, river sand, gravel and clay;
   (c) mining within a river system or wetland regardless of the size of the mining project;
   (d) exploration of minerals where drilling and blasting is involved;
   (e) exploitation of minerals, including quarrying;
   (f) exploration, extraction and processing of hydrocarbons;
   (g) mineral processing;
   (h) metallurgical and chemical plants associated with mining, including cement and lime kilns manufacturing; and
   (i) foundries

4. Waste management -

(a) establishment or expansion of any of the following waste management facilities: incineration plant, recovery or recycling plant, waste disposal facility (such as landfill, dump site, etc);

(b) radioactive waste storage and disposal facilities;

(c) all sewer networks (excluding individual connections to main sewer lines) and associated manholes, sewage pumps stations;

(d) pre-treatment facilities containing hazardous waste;

(e) establishment of facilities for the storage/treatment/disposal of hazardous waste such as chemicals, (for example, obsolete pesticides or fertilizers), and asbestos or products containing asbestos, electronic equipment, batteries, fluorescent and energy saving bulbs, clinical wastes and other obsolete equipment containing hazardous waste;

(f) facilities for the treatment or processing of waste such as used tyres, used oil, waste water or polluted ground water.

5. Energy industry -

(a) the construction of facilities for electricity generation;

(b) the construction of radioactive energy facilities;

(c) the construction of -

(i) petroleum service stations, consumer installations, commercial and bulk storage petroleum installations including (including storage installations for bio-fuels) with a total capacity of 23 000 litres or more,

(ii) liquid petroleum gas (LPG) marketing or commercial installations for distribution to dealers or retailers,

(iii) fixed transport structures including LPG pipelines, and

(iv) manufacturing or processing plants for the production of energy including coal to liquids, crude oil refining and coal bed methane harvesting;

(d) commercial plants for the manufacture of charcoal and coal briquettes;

(e) construction of all commercial or industrial facilities for the generation, transportation and utilisation of natural gas;

(f) installations for production of biofuels; and

(g) development of energy crop farms for bio-fuels production covering an area of 100ha or more.

6. Infrastructure developments -

(a) construction of roads (primary, secondary, tertiary and access);
(b) fencing of roads;
(c) construction of fire breaks;

(d) construction of tunnels;
(e) construction of bridges over water courses;
(f) infrastructure developments inside protected areas such as aerodromes, roads, power lines, wildlife watering points and tourist facilities;
(g) construction of dams, levees, barrages, or weirs affecting the flow of river systems;
(h) construction of well-fields where abstraction of water will be 22.27 m^3 or more per second/ borehole per day;
(i) intention recharging of an aquifer with any waste water;
(j) construction of canals, channels, river diversions or water transfer schemes between catchments;
(k) development of flood control schemes;
(l) construction of water pipelines and reticulation networks (excluding individual connections);
(m) construction of storm water drainage facilities;
(n) construction of telecommunication cables and networks;
(o) development of airports and airfields;
(p) installation of power lines;
(q) installation of power substations;
(r) land reclamation works;
(s) development of industrial estates;
(t) development of residential estates;
(u) development of institutional facilities (such as schools, hospitals, etc.);
(v) development of shopping centres or complexes;
(w) construction of railway lines;
(x) plants for the manufacture and assembly of motor vehicles;
(y) installations for telecommunication, broadcasting and radio transmission;
(z) establishment of cemeteries and crematoria; and
(aa) construction of facilities for storage of radioactive materials.

7. Chemical, rubber and plastic industry -

(a) chemical manufacturing or processing plants;
(b) oil refining plants;
(c) plants for the manufacturing or processing of plastic and rubber;
(d) fertilizer and pesticide manufacturing or processing plants;
(e) large scale application of new pesticides and fertilizers introduced in the country for the first time;
(f) facilities for the manufacture of pharmaceutical products;
(g) storage facilities for hazardous chemicals; and

(h) facilities for the manufacture of paints and allied products.

8. Food industry:

(a) milk processing with a production output of 1000 000 litres or more per month;

(b) manufacture of dairy juice with a production output of 1000 000 litres or more per month

(c) commercial brewing and malting;

(d) installations for slaughter of animals with a throughput of 50 animals or more per day; and

(e) fish processing plant - more than 100 tons a year.

9. Leather and textile industry -

(a) tanneries; and

(b) textile manufacturing operations where dyes are to be used.

10. Wood and paper industry -

(a) pulp and paper mills; and

(b) wood processing operations or expansion of existing wood processing operations.

11. Firing ranges, manufacture and packing of gunpowder and explosives -

(a) outdoor firing ranges;

(b) installations for manufacture of explosives, arms or ammunition; and

(c) installations for storage explosives and ammunition.

12. Tourist enterprises -

(a) hospitality facilities with 50 guest rooms or more; and

(b) hospitality facility in environmentally sensitive areas, including but not limited to campsites, lodges and hotels.

13. Recreation related infrastructure -

(a) sports complexes;

(b) golf courses;

(c) establishment of routes or tracks for outdoor racing of motor powered vehicles such as motorcars, trucks and motorcycles; and

(d) amusement parks.

14. Agricultural projects -

(a) land developments for the purpose of field crops in an area of 100 hectares or more;

(b) large scale dairy farms with stock rate of 100 or more cows;

(c) large scale feedlots with stock rate of 250 or more cattle;

(d) large scale horticulture projects in an area measuring 10 hectares or more;

(e) large scale ostrich farms with stock rate of 100 birds or more;

(f) large scale pig farms with stock rate of 50 sow units;

(g) large scale pig farms of 50 piglets or more for weaner scheme;

(h) large scale crocodile farming production systems with a total pond capacity of 400m^3 or more where there is any direct discharge from the production system to the environment;

(i) establishment of game or livestock farm or ranch in an area measuring 3600 hectares or more;

(j) large scale poultry farms with stock rate of 20 000 birds or more;

(k) irrigation of any land with waste water generated through industrial activity or by any water works;

(l) introduction of new crops, plants and animals, including Genetically Modified Organisms and Living Modified Organisms;

(m) establishment of fences which are designed to control wildlife and livestock diseases;

(n) construction of fish-farming production systems with a capacity of 4000 m^3 or more; where there is any direct discharge from the production system to a receiving water body; commercial fish farming venture with an annual production of 20 tonnes or more; and fish farming production systems where exotic species will be used;

(o) establishment or expansion of logging operations covering an area of greater than 50 hectares;

(p) establishment of forest plantations, woodlots and tree nurseries of 50 hectares or more; and

(q) small scale small stock (goats and sheep) farms with stock rate of 1000 or more.

15. Programmes, policies and plans -

(a) land use and structural plans;

(b) settlement plans;

(c) national policies, legislation and development strategies and programmes

16. Other

(a) construction of metal processing plants;

(b) a project likely to affect any area protected by the laws of Botswana or such other regional or international laws or conventions;

(c) a project whose implementation will likely cause a public outcry or will result in the displacement of people;

(d) a project likely to give rise to particular complex or adverse effects whose management is not well understood;

(e) a project whose implementation will result in substantial use of a natural resource in a way that prevents the use or potential use of the resources for any other purpose; and

(f) any activity aimed at the modification of atmospheric precipitation.

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SCHEDULE 2

REF: DEA/BOD/ …… RECEIPT No ……. DATE ……

Form A
(regulation 4(1))

PROJECT BRIEF

Instructions for completing the project brief:

The project brief is to be completed in full and submitted after payment of the application fee in accordance with Section 6 (2) of the Environmental Assessment Act, 2011. Please note that the proof of payment is required at the time of submission of the application.

Please note that all sections of the form must be completed and additional information about the project should be attached to the form where the space provided is not sufficient (**alterations of the form shall not be permitted**).

Any person who provides false information in the project brief fraudulently is liable to a penalty under section 12 (4) of the Act.

To ensure that the implementation of planned activity is not delayed, the project brief should be submitted at the time when a project concept is being considered or at the pre-feasibility stage of the project cycle.

Please note that where it is determined by the competent authority that an environmental assessment study is required, the details and certificate of practice of the practitioners whom the developer intends to deploy, shall be submitted to the competent authority by the developer prior to undertaking the environmental impact assessment in accordance with the Environmental Assessment Regulations, 2012.

SECTION A:

Applicant details

Name of project :	
Estimated project cost:	
Project proponent:	
Contact person:	
Postal address:	
Physical address:	
Telephone no:	
Fax no:	

E-mail address:	
Project location: (*Location map should be attached)*	

SECTION B:

1. **Project details**:

a. Provide a brief description of the project.

……

…….....……

……..……

b. What is the physical scale or the size of the development?

……

……
…….

c. What is the anticipated lifespan of the project within the foreseeable or predicted future?

……

……..

2. **Project processes**: (*Attach project flow diagram and photos where applicable*.)

a. What are the materials that the activity shall use, including both construction materials and inputs?

……..

……..……

……

b. What are the possible products and by-products including waste generation of the activity?

……

…….

……

3. **Planning issues**:

a. Has land been allocated for the proposed project? .....
(*Attach supporting documents where applicable*)

b. What is the current land use of the area or site for the proposed project? …….

c. Will the proposed development require a change in land use? .....
(*If yes, attach letter of approval for change of land use*)

d. Are the following services available in the area where the development is to be located?

Roads (specify)
……

Water (specify)
……

Power
..……..……(specify)

Telecommunications

…… (specify)

Sewerage system (specify)
……..……

Waste management system (specify)
……

Other
…… (specify)

e. Will the development result in displacement of people or property?
……..……..

If yes, how many people or number of households will be affected?
.....

f. What is the (approximate) distance of the proposed site from the following land uses-

i. residential …….

ii. industrial ……..

iii. commercial ……..

iv. agricultural (arable/pastoral) ……

v. civic & community (e.g church, school, park, etc)……

g. Is the project located within or near any of the following areas? Specify the distance.

Area	Yes	No	Approximate distance
National park /game reserve/			
Wildlife management area			
Wetland (river, stream, dam, pans or any other areas with open surface water (whether seasonal			
Flood plains			
Important breeding areas for fauna			
Areas containing rare or endangered flora and fauna			
Important archaeological, historical, religious or cultural sites			
Areas protected under legislation			
Hilly areas			

SECTION C:

1. Outline the possible impacts of the project on the environment (biophysical and socio-economic) in terms of:

a. Negative impacts

……
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……
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……

b. Positive impacts

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……

c. What measures will be undertaken to address the negative impacts?

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……
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……

d. Provide any additional information that may assist in the evaluation of the application.
……
……
……
……

SECTION D:

I……certify that the information provided is to the best of my knowledge true and correct.

Signed: _____
Date:_____

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Form B
(regulation 5)

CONTENT OF THE ENVIRONMENTAL MANAGEMENT PLAN

This guideline facilitates the standardisation of the Environmental Management Plan (EMP). An EMP will usually be necessary where the proposed project does not qualify for the undertaking of a detailed environmental impact assessment study, but by virtue of the associated impacts would require the development of an environmental management programme to manage the implementation of the project. The EMP may also be required for projects which were implemented prior to the enactment of the EIA legislation but would have otherwise required a detailed assessment prior to their implementation.

The EMP should contain information required by this guideline in accordance with the requirements of the Act. However, the contents should not be taken as static. They are allowed to vary with proposed management actions, complexity and likely impacts which come with different projects in different sectors. In this regard the content of the EMP would be allowed to vary only as one sector varies from the other in terms of complexity of the sector or the nature of its impacts on the environment. The structure and content of the EMP prescribed here should therefore at the minimum contain the following:

a. The name of applicant and consulting team:

The name of the applicant as well as the consulting company (or team of companies), should be clearly written on the cover page of the report. This information including postal addresses, telephone number(s), telefax, email as well as the practitioners' registration number should be clearly indicated on the first page of the report.

b. Executive summary (also referred to as a non-technical summary):

The executive summary should be a concise summary of the report, briefly describing the project, location, the proponent and the organisation undertaking the environmental assessment. Furthermore, the methodology used during the study, expected impacts, management measures as well as recommendations and conclusions should be highlighted.

c. Introduction:

The introduction should provide a discussion of the nature of the project proposed, its location, and if the project is part of a larger proposal. The project developer must be clearly identified, as must be the consulting team who carried out the assessment. It should outline the background to the project and the reasons or necessity of it.

d. Policy, legal and administrative framework:

This section should identify and discuss in detail the relevance of the policies, legislation, regulations, plans, guidelines as well as planning and implementation approvals which have a bearing on the proposed project. This includes national laws and regulations on EIA, environmental guidelines if they exist, regional, relevant international conventions, and local regulations, environmental assessment regulations of any financing organisations and relevant corporate environmental policies.

e. Description of the project:

Information on the description of the project should include but not be limited to the following –

- purpose of project;
- status of the project in the project cycle: pre-feasibility, feasibility, detailed engineering and design, implementation (construction), operational, decommissioning;
- location of proposed project on a map;
- preliminary design (if available), infrastructural requirements and size of the development;
- anticipated duration of construction (where applicable), operation, close down;
- transport and access arrangements;
- overall operation of processes involved;
- type and quantity of resources used; and
- estimated type, quantity, composition, strength of residues or emissions; and processes for the containment, treatment and disposal of wastes.

f. Description of baseline environment:

The EMP document should provide an appraisal of dimensions of the study area and descriptions of relevant physical, biological and socio-economic conditions as this is important for future monitoring and auditing. Current and proposed developments in the area should also be taken into account. An evaluation of the local, district, and national development plans is especially important in this regard together with latest information from the Central Statistics Office.

g. Stakeholder consultation:

This section should discuss the objectives, methods and results of consultations undertaken with the Interested and Affected Parties (IAPs) as well as the relevant institutional stakeholders. A record of all stakeholders consulted as well as the minutes of the consultation meeting(s) should be annexed to the report. It should be noted that it is not mandatory for the developer to publicise the activity in the mass media as per section 7 (2) (a) of the Act nor will the developer be obliged to prepare and submit the scoping report and terms of reference for developing the EMP. However where it is deemed necessary, the competent authority may at its discretion, require for such.

h. Identification and assessment of environmental impacts:

This section forms the basis for any mitigation or enhancement action. Impact identification refers to the listing or qualitative and quantitative description of potential impacts that will result from the implementation of a project. This should include a description of the impacts

for all the project phases that is, pre-construction, construction, operational and decommissioning phase. The causes for such impacts should also be identified. The description often captures the characteristics of the impacts which include –

- *Positive and negative*: Negative impacts harm, degrade or impair the ecosystem health and the health and quality of life of people who live and work in the affected ecosystems. Some impacts can be perceived to be neutral, whilst others are positive;
- *Direct and indirect:* Direct impacts are created directly by a project action (for example, displacement of people caused by the construction of a dam). Indirect impacts result from subsequent impacts caused by the direct impacts (reduction in living standards for the displaced people). Direct impacts are more easily identifiable and quantifiable than indirect impacts;
- *Long term and short term*: Some impacts occur only during the construction phase of the project (short term), others persist to the operational phase (medium term) and others linger on long after the project has been decommissioned (long term);
- *Recurring and non-recurring:* Some impacts occur repeatedly in space and time, while others occur only once;
- *Regional and local*: Some impacts cover large areas whilst others are restricted to a small area;
- *Cumulative and non-cumulative:* Cumulative impacts result when impacts from one activity combine with those from another activity to produce a greater impact or a different impact. Non-cumulative impacts do not accumulate in space and in time; and
- *Reversible and irreversible*: This refers to the permanence of an impact. Impacts maybe reversible by natural means at natural rates (for example, sand deposition) or through human intervention (for example, reforestation). However, some impacts are irreversible such as the elimination of particular wildlife habitats through urban development.

Some common methods used to identify impacts include: checklists, matrices and impact networks. Impact assessment deals with the evaluation of the impacts. Having established the range of impacts associated with a development project, it is necessary to predict their magnitude and significance. In general terms, this relies upon baseline studies to establish environmental conditions prior to the project, forecasting methods to predict future conditions, with and without the project, and comparison with environmental standards, and guidelines where appropriate. Evaluation also captures the time period for which impacts are predicted (when they are going to occur and whether short term or long term) and the distribution of the impact (in time and space). Thus after evaluation, the change brought about by an impact can be said to be slight, moderate or substantial, or better still, quantified (for instance the opening up a diamond mine can result in employment levels going up by 60% in an area). Impacts can also be determined to be significant or insignificant after the evaluation. Methods used in the prediction and evaluations of impacts such as those listed below should be discussed before the identification and evaluation of impacts:

- Interaction matrices;
- Geographic information systems;
- Ranking and weighting; and
- Mathematical models.

i. Analysis of alternatives:

Proposed investment design, site, technology and operational alternatives should be compared systematically in terms of their potential impacts, capital and recurrent costs, suitability under local conditions and institutional, training and monitoring requirements. To the extent possible, for each of the alternatives (including the 'no action alternative'), the environmental costs and benefits should be quantified and economic values attached where

feasible. Alternatives can be grouped under the following headings and will be relevant at the different stages in the project cycle –

- Demand alternatives (for example, using energy more efficiently rather than building more generating plants);
- Activity alternatives (for example, providing public transport rather than increasing road capacity);
- Location alternatives (either for the entire proposal or for the component (for example, the location of the processing plant for a mine);
- Process alternatives (for example, reuse of "waste products" in production, reuse of water, process-optimising and waste reduction, use of more energy or resource efficient processes); and
- Input alternatives (for example, raw material, energy sources).

j. Mitigation Measures:

Mitigation is the development of practical measures to reduce adverse impacts on the environment, or to enhance the beneficial aspects of an action. Thus mitigation seeks to:

- Find ways of implementing projects with minimum environmental costs;
- Minimise or eliminate negative impacts;
- Ensure the health and safety of workers or employees;
- Enhance the benefits of a proposal; and
- Protect the public and individual rights to compensation.

Feasible and cost-effective measures which will reduce potential environmentally significant impacts to acceptable levels should be proposed including capital and recurrent costs, and institutional and training requirements of those measures estimated. There should be clear responsibility for the proposed actions stated, timelines given for implementing the measures and an estimated cost provided. Mitigation is an encompassing term to denote actions that serve to avoid, reduce or compensate for adverse impacts and promote or increase the beneficial impacts of a project. Elements of mitigation thus include –

- Avoidance-this implies avoiding projects or activities that could result in adverse impacts;
- Minimisation-this refers to minimising the degree, extent, magnitude or duration of adverse impacts. Minimising project impacts can be achieved through –
    - project design modification;
    - use of alternative site (location);
    - use of alternative raw materials;
    - change of production systems; and
    - use of cleaner production technologies.
- Rehabilitation-this refers to rectifying adverse impacts by repairing or enhancing the affected resources;
- Restoration- this is an extreme form of rehabilitation and typically requires an extensive engineering of a selected resource to achieve what might be considered original state. It should be borne in mind that once a habitat is destroyed it is extremely difficult to recreate it to the original state;
- Replacement-this is compensation for the loss of a natural resource at a location with the creation or protection of the same natural resource (or one similar in nature), at another location; and
- Compensation-this refers to the awarding of financial or material benefits to people affected by the project (especially those who have lost their homes and livelihoods).

k. Archaeological Impact Assessment:

A summary of the findings and recommendations of the Archaeological Impact Assessment should be discussed. Reference should be made to the detailed findings and recommendations which should form part of the appendices.

l. Impact mitigation and monitoring plan:

This section represents the actualisation and the administration of the implementation of mitigation measures, including monitoring, in all the project phases. The EMP document should present, in a tabular format (landscape orientation), the plans for the mitigation and monitoring of identified impacts. It is also necessary to have a decommissioning (remediation and rehabilitation) programme for projects. No matter how long the project lifespan, decommissioning must be considered at the time of project planning. Therefore impacts related to the decommissioning phase and a plan for addressing such impacts should also be provided.

Mitigation Plan:

The impact mitigation plan should be presented in a manner in which impacts will be managed and for clarity of presentation this should be tabulated. This should, at the minimum contain -

- the phase of the development;
- the activities or processes where impact is likely to emanate;
- the impacts that need to be mitigated;
- the mitigation objectives for each impact;
- the mitigation measures or specific actions required to achieve the mitigation objectives;
- resources required for mitigation;
- estimated costs for mitigation measures; and
- responsibility for implementing mitigation measures.

Monitoring Plan:

The consulting team will, on the developer's behalf, design a monitoring plan that is workable. A monitoring scheme for any project is designed to, among other things, check the compliance of the activities of the project against set standards and regulations. Monitoring is also important for checking the performance of the project against set targets. The monitoring plan will enable the project to comply with regulatory requirements as well as help to verify the accuracy of impact prediction. The responsibility of government agencies and developer in implementing the monitoring plan should be outlined. Monitoring should cover both the short term and long term. It is important to point out that the responsibilities of monitoring in the EA Act are assigned to the relevant technical department or local authority. The developer is required by the EA Act to submit an evaluation report on monitoring to the relevant technical department or local authority. The monitoring data will function as an 'early-warning' system indicating if an impact is occurring and allowing action to be taken to remedy the situation if data show existence of a trend likely to result in an unacceptable impact in the near future.

The monitoring plan should be presented in a manner in which impacts will be monitored and should at the minimum contain -

- phase of the development;
- impact;
- parameter to be monitored;
- source or location of monitoring;
- method of indicating that the mitigation measures have been successful (key performance indicator);
- methods of monitoring;
- responsible agent for monitoring;
- frequency of monitoring;
- reporting mechanism;
- thresholds or existing standards; and
- recommended action if threshold is exceeded.

Decommissioning Programme:

Different projects have different life spans, some long and some short. Similarly, some projects gradually decommission at the end of their lifespan, but for some decommissioning is sudden and the effects are tremendous. It is essential therefore to incorporate decommissioning in the overall planning process. A decommissioning plan or programme should contain the following as a minimum –

- a projected estimate of the life span of the project;
- briefly identify impacts that would result from the decommissioning process and how these would be managed; and
- provide a rehabilitation or restoration plan.

m. Conclusions and Recommendations:

Appropriate conclusions should be drawn from the report. It is important to have these conclusions summarised in a series of brief statements referring to relevant sections of the EMP document. This conclusion should focus on the methodology, significant impacts, the measures proposed to avoid or mitigate them and the impact management proposals for project implementation. This section should also contain recommendations to the project. Each recommendation should be presented separately and numbered, and should be concise and very clear.

n. References:

The report should have a list of references used in the study. The references should be presented in alphabetical order.

o. Appendices:

Appendices contain information not directly useful in the text of a report but needed for reference or detailed review by technical expects. The list of appendices should include –

- sources of data and information;

- all individuals and agencies consulted for specialist information or knowledge used in the report referred to in the text;
- written opinions received from outside specialists;
- Field data collection programmes completed during the study;
- findings of the Archeological Impact Assessment;
- detailed data reduced for use in the main body of the report;
- detailed technical analysis of particular impacts (for example, pollution dispersal, soil erosion, demands for social services);
- detailed location plan and technical maps, designs, drawings, photographs, flow diagrams, etc;
- summary of the programme for consulting the public in project planning and assessment, plus a complete record of all parties (stakeholders) consulted and minutes of the meetings;
- names, curriculum vitae and roles of the team members who carried out the study; and any other relevant information.

Republic of Botswana
Ministry of Environment Wildlife & Tourism

Department of Environmental Affairs

Telephone: (267) 3902050
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Email: envirobotswana@gov.bw

All Correspondence to be addressed to the Director

Private Bag 0068
Gaborone
Botswana

Form C
(regulation 6)

SCOPING EXERCISE AND REPORT

A. Scoping Exercise

1. Scoping is a process of interaction between interested and affected parties (IAPs), government agencies and proponents. In undertaking scoping applicants (proponents or project developers should be aware of the role played by scoping in the Environmental Impact Assessment (EIA) process.

2. The objectives of scoping in the EIA process

   The objectives of scoping in the EIA process include -
   - focusing the EIA study so that only relevant and important issues are addressed by the EIA;
   - refining time or space boundaries for the EIA;
   - to facilitate an efficient assessment process that saves time and resources and reduces costly delays;
   - identifying the possible effects of the proposal;
   - considering reasonable and practical alternatives;
   - to allow a prioritisation of the issues to be addressed;
   - to organise, focus and communicate the potential impacts and concerns, to assist further analysis and decision making; and
   - most importantly, establishing the terms of reference (ToRs) to be used as the basis of the ongoing assessment.

3. Identifying interested and affected parties (IAPs)

   An important aspect of the scoping exercise is the identification of interested and affected parties (stakeholders) to be involved in the scoping exercise. These will differ from project to project. The following are some of the IAPs that should be involved in the scoping exercise. Their different roles are also summarised:

   - The project developer (if the applicant has hired a practitioner to lead the scoping exercise): usually knows most about the proposal and will know most about the factors that influence site location. The scoping exercise will allow the project developer to recognise the perspective of others, to consider alternatives and issues of concern raised by those affected, and to make changes to the proposal which will both address the concerns raised and improve the proposal;

- The competent authority will have the procedural requirements for the scoping and may issue directives on the scope of the EIA;
- Other government agencies: will contribute detailed knowledge about specific issues under their jurisdiction;
- Environmental practitioners and experts;
- Licensing or permitting authorities such as local Land Boards, Department of Mines, Town and Country Planning Board, National Industrial Licensing Authority, Local Authorities, etc.;
- Those Affected: have a major role in identifying issues and ensuring that local knowledge and values are understood. The views of those affected should be taken into account in choosing between alternatives, in deciding on the importance of issues, and in framing mitigation measures, compensation provisions and management plans;
- Local authorities including local government, tribal leadership (Dikgosi); and
- The wider community including local, national and sometimes international NGOs.

Designing the public participation or consultation plan

The Consultation plan will indicate the IAPS to be consulted; the method that would be used for consultation and the venues and times of consultation. In designing the consultation plan, the applicant should consider relevant methods for consulting different stakeholders including the following:

- *Questionnaire, polls and surveys*: to determine public attitudes and perceptions on various issues;
- *Advertisement*: public notices describing the details of the project and issues involved placed at accessible locations;
- *Mass media*: use of newspapers, TV and radio coverage to reach a large proportion of the community;
- *Leafleting*: brochures, leaflets and information sheets distributed to the public as a quick and easy method of providing general information;
- *Personal contact*: direct discussions between project staff and individuals interested in the effects of the project;
- *Community presentations*: presentations given by the developers specific community groups;
- *Workshops*: Generally most effective for discussing and identifying solutions to problems, scoping of potential impacts and creating other plans of action;
- *Public meetings*: meetings by the developer to make a presentation describing the project and the relevant issues, which is then followed by a question and answer session; and
- *Public hearings and inquiries*: more formal than public meetings.

4. Undertaking the Scoping Exercise

Once the public consultation plan has been finalised, the applicant should proceed with the scoping exercise as set out in the plan taking note of the provisions of the Act, section 7(2) which states that in seeking the views of the people or communities, the applicant shall -

- Publicise the intended activity, its effects and benefits in the mass media using the official languages for a period not less than 21 days, and
- After the expiry of the period of 21 days, hold meetings with the affected people or communities to explain the activity and its effect.

B. Scoping report

After completing the scoping exercise, the applicant should produce a scoping report to be submitted to DEA. The content of the report should at the minimum, include the following -

- Introduction and background information

  This section should include:

  - A brief description of the major components of the proposed project including location (provide maps where possible), general layout; size, capacity; preconstruction activities, construction activities; schedule, staffing and support; facilities and services, operation and maintenance activities; required off-site investments; and life span, justification for the project and the objectives it is intended to meet, its current status and timetable and the identities of any associated projects.
  - Details of the proponent and the consulting team undertaking the environmental assessment study;
  - The project location with a brief description of the baseline environment (biophysical and socio-economic);
  - The purpose and objectives of the scoping exercise;
  - The boundaries where the scoping exercise focused;
  - The methodology being used for the scoping exercise and the description of the public participation process in terms of identification of IAP's; establishment and record of procedure by which the identified and non-identified IAPs were afforded the opportunity to participate; provision for IAP's to express their views about the scope of the EIA, including alternatives that were investigated; list of issues identified as being of concern to IAPs; and notification criteria (reason for participation, where, when and to whom comments can be sent).

- Outcomes of the scoping exercise

  This section should:

  - Identify and briefly discuss any policies, legislation, regulations, plans, guidelines, etc. which impact on the proposed planning, development and operation of the proposed project;

  - Describe the environmental issues identified including the definable impacts and their causes; and

  - Summarise the views of stakeholders (including local communities) who were consulted. (Note that the list of interested and affected parties consulted, minutes of the consultation meetings and advert for the public meetings should be annexed to the scoping report).

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Department of Environmental Affairs

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Gaborone
Botswana

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FORM D
(regulation 7)

TERMS OF REFERENCE

Terms of Reference

The Terms of Reference (ToR) define all issues or the scope of work on which the EIA study will focus. The information provided below should only be used as a guide since projects, their status in the project cycle, and proponent needs vary widely and, thus, ToR contents cannot be standardised.

Nonetheless, the report should have an introduction which should state the purpose and objectives of the ToRs and identify the development project to be assessed. It should also summarise the general scope of the environmental assessment and discuss its timing in relation to the processes of project preparation, design and implementation. The boundaries for the study area for the assessment should also be specified.

A description of all the tasks to be performed in the EIA study should be provided and should, at a minimum, include:

- Policy and regulatory framework:
  The ToRs should outline any policies, legislation, regulations, plans, guidelines as well as planning and implementation approvals which impact on the proposed project, the relevance of which should be discussed in detail during the EIA phase.

- Description of the environment:
  The baseline data on the relevant environmental characteristics of the study area to be discussed in the EIA should be highlighted. The discussion in the EIA should present and evaluate the baseline environmental aspects of the study area and highlight any anticipated changes before the project commences. The description of the environmental baseline should include:
  - *Physical environment:*
  - *Biological environment:*
  - *Socio-cultural environment (both present and projected where appropriate*)

- Public consultation**:**
  The ToRs should require that a consultation programme be clearly presented in the EIA report (that is, objectives of scoping exercise, methods used for consultations and outcomes of the consultations). Any further consultations to be undertaken with the IAPs during the EIA study should be indicated in the ToRs.

- Analysis of alternatives to the proposed project:
  Describe alternatives that would be examined in the course of developing the proposed project and identify other alternatives which would meet the same objectives.

- Prediction and assessment of the potential impacts for the proposed project:
  This is the major activity of the EIA process. There are a wide range of tools available to the EIA practitioner for predicting the impacts of a proposed activity. This section should include an outline of the environmental impacts to be assessed as well as the methods and criteria to be used to judge impact severity and significance (that is, the methodology and criteria used for impact identification, impact analysis and impact assessment such as check lists; matrices; overlays; impact networks; simulation models; ranking and weighting; surveys; public consultations; analysis of the severity of impacts; and appraisal of how significant these impacts are likely to be).

- Presentation of mitigation measures:
  The need for the EIA to address measures for avoiding, mitigating and managing impacts should be clearly stated. The ToRs should indicate that the consulting team will recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels and enhance positive impacts.

- Development of an environmental management plan:
  While the project is in operation within the environment, it is necessary to have an EMP in place that will determine how the impacts of the project are handled. The ToRs should indicate the structure to be used for the EMP, which should normally incorporate any necessary monitoring and the identification of institutions responsible for implementing the monitoring program. The EMP should also contain a plan for decommissioning of the project.

- Archeological Impact Assessment (AIA):
  The EIA and AIA should be carried out concurrently. The applicant shall check with the Department of National Museum and Monuments to comply with the Monuments and Relics Act (Cap. 59:03). The applicant should indicate in the terms of reference whether an AIA will be carried and the level to which it will be carried out.

- Report:
  The environmental assessment report should be concise and limited to significant environmental issues. This section should describe the structure that will be used for the report.

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Form E
(regulation 8)

CONTENT OF THE ENVIRONMENTAL IMPACT STATEMENT

This guideline facilitates the standardisation of the Environmental Impact Statements (EIS). An EIS should contain information required by the Act. However, the contents should not be taken as static. They are allowed to vary with proposed management actions, complexity and likely impacts which come with different projects in different sectors. In this regard the content of the EIS would be allowed to vary only as one sector varies from the other in terms of complexity of the sector or the nature of its impacts on the environment. The structure and content of the EIS prescribed here should therefore at the minimum contain the following –

a. The name of applicant and consulting team:

   The name of the applicant as well as the consulting company (or team of companies), should be clearly written on the cover page of the report. This information including postal addresses, telephone number(s), telefax, email as well as the practitioners' registration number should be clearly indicated on the first page of the report.

b. Executive summary (also referred to as a non-technical summary):

   The executive summary should be a concise summary of the report, briefly describing the project, location, the proponent and the organisation undertaking the environmental assessment. Furthermore, the methodology used during the study, expected impacts, management measures as well as recommendations and conclusions should be highlighted.

c. Introduction:

   The introduction should provide a discussion of the nature of the project proposed, its location, and if the project is part of a larger proposal. The project developer must be clearly identified, as must be the consulting team who carried out the assessment. It should outline the background to the project and the reasons or necessity of it.

d. Policy, legal and administrative framework:

   This section should identify and discuss in detail the relevance of the policies, legislation, regulations, plans, guidelines as well as planning and implementation approvals which have a bearing on the proposed project. These include national laws and regulations on EIA, environmental guidelines if they exist, regional, relevant international conventions, and local

regulations, environmental assessment regulations of any financing organisations and relevant corporate environmental policies.

e. Description of the project:

Information on the description of the project should include but not be limited to the following –

- Purpose of project;
- The status of the project in the project cycle: pre-feasibility, feasibility, detailed engineering and design, implementation (construction), operational, decommissioning;
- Location of proposed project on a map;
- Preliminary design (if available), infrastructural requirements and size of the development;
- Anticipated duration of construction, operation, close down;
- Proposed transport and access arrangements;
- Overall operation of processes involved;
- Type and quantity of resources used; and
- Estimated type, quantity, composition, strength of residues or emissions; and processes for the containment, treatment and disposal of wastes.

f. Description of baseline environment:

The EIS should provide an appraisal of dimensions of the study area and descriptions of relevant physical, biological and socio-economic conditions as this is important for future monitoring and auditing. Current and proposed developments in the area should also be taken into account. An evaluation of the local, district, and national development plans is especially important in this regard together with latest information from the Central Statistical Office.

g. Public consultation:

This section should discuss the objectives, methods and results of public consultations undertaken during the scoping exercise. Where applicable, the methodology utilised for further consultation of IAPs during the EIA, and outcomes of the consultations should also be discussed. A record of all stakeholders consulted as well as the minutes of the consultation meeting(s) should be annexed to the report.

h. Identification and assessment of environmental impacts:

This is a crucial part of the EIA process and forms the basis for any mitigation or enhancement action. Impact identification refers to the listing or qualitative and quantitative description of potential impacts that will result from the implementation of a project. This should include a description of the impacts for all the project phases that is, pre-construction, construction, operational and decommissioning phases. The causes for such impacts should also be identified. The description often captures the characteristics of the impacts which include:

- *Positive and negative*: Negative impacts harm, degrade or impair the ecosystem health and the health and quality of life of people who live and work in the affected ecosystems. Some impacts can be perceived to be neutral, whilst others are positive;

- *Direct and indirect:* Direct impacts are created directly by a project action (for example, displacement of people caused by the construction of a dam). Indirect impacts result from subsequent impacts caused by the direct impacts (reduction in living standards for the displaced people). Direct impacts are more easily identifiable and quantifiable than indirect impacts;
- *Long term and short term*: Some impacts occur only during the construction phase of the project (short term), others persist to the operational phase (medium term) and others linger on long after the project has been decommissioned (long term);
- *Recurring and non-recurring:* some impacts occur repeatedly in space and time, while others occur only once;
- *Regional and local*: Some impacts cover large areas whilst others are restricted to a small area;
- *Cumulative and non-cumulative:* Cumulative impacts result when impacts from one activity combine with those from another activity to produce a greater impact or a different impact. Non-cumulative impacts do not accumulate in space and in time; and
- *Reversible and irreversible*: This refers to the permanence of an impact. Impacts maybe reversible by natural means at natural rates (e.g. sand deposition) or through human intervention (for example, (reforestation). However, some impacts are irreversible such as the elimination of particular wildlife habitats through urban development.

Some common methods used to identify impacts include: checklists; matrices; and impact networks. Impact assessment deals with the evaluation of the impacts. Having established the range of impacts associated with a development project, it is necessary to predict their magnitude and significance. In general terms, this relies upon baseline studies to establish environmental conditions prior to the project, forecasting methods to predict future conditions, with and without the project, and comparison with environmental standards, and guidelines where appropriate. Evaluation also captures the time period for which impacts are predicted (when they are going to occur and whether short term or long term) and the distribution of the impact (in time and space). Thus after evaluation, the change brought about by an impact can be said to be slight, moderate or substantial, or better still, quantified (for instance the opening up of a diamond mine can result in employment levels going up by 60% in an area). Impacts can also be determined to be significant or insignificant after the evaluation. Methods used in the prediction and evaluations of impacts such as those listed below should be discussed before the identification and evaluation of impacts:

- Interaction matrices;
- Geographic information systems;
- Ranking and weighting; and
- Mathematical models.

i. Considerations for transboundary impacts:

At times, the environmental impact of a project may be realised across international boundaries. Such an impact is described as ‘transboundary’. "Transboundary impact" may be defined as any impact, not exclusively of a global nature, within an area under the jurisdiction of a country caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another country. There are two distinct scenarios involved in the assessment of such impacts, viz:

- The activity is recognised as national and the neighbouring countries do not wish to take part directly in the EIA process, even though its impact extends beyond the national border to their territories, preferring to exercise their right as interested and affected parties only. Under this

scenario, the country of origin will share information on its EIA process in a transparent manner and take the concerns of its neighbours into consideration; and

- Neighbouring countries, recognising that the proposed activity's impact will affect them too, may decide to take part in the EIA process directly with the proponent country. In this case, the EIA will be carried out under negotiated terms based on a common international convention to which all the parties are signatory or the respective national EIA processes. In the SADC Region, there is no protocol dealing directly with the conduct of EIA in a transboundary context, as obtains in other regions for example, the Espoo Convention. However, there are protocols on specific areas of cooperation that have significant provisions for dealing with transboundary impacts, for example, the Revised Protocol on Shared Watercourses. These protocols could form the basis for negotiating procedures to adopt for conducting multilateral EIA.

- The requirement of environmental impact assessments in respect of activities that are likely to significantly affect the environment enshrined in the Act, in the case of purely domestic impacts, may be extended to cover impacts arising beyond the borders of Botswana that can be attributed to an activity within Botswana. The basis for such extension can be found in several conventions, treaties or agreements to which Botswana is a signatory. For example:

    - Principle 17 of the Rio Declaration on Environment and Development; Article 5 of the Legal Principle for Environmental Protection and Sustainable Development, adopted by the Experts Group on Environmental Law of the World Commission on Environment and Development;

    - The 1987 Goals and Principle of Environmental Impact Assessment developed under the auspices of UNEP by the Working Group of Experts on Environmental Law and which were adopted by the UNEP Governing Council at its 14th session, and commended to States to be considered for use as a basis for preparing appropriate national measures including legislation; and

    - Article 3 (10a) of the Revised SADC Protocol on Shared Watercourses, the so-called "No Harms Rule" ; and similar obligations imposed by Article 4 of the same protocol making it mandatory to inform neighbours in the event of an incident that has the potential to cause significant harm in the territory of the neighbour.

All these impose an obligation which must be reflected in the domestic EIA process in as much as transboundary impacts are concerned.

Procedure for transboundary impacts:

The procedure to be adopted cannot be much different from the procedures already described for domiciled impacts. Reference should therefore be made to those guidelines. However, there are some areas that require additional input as described below:

- Where an activity is likely to have an impact outside the borders, the scoping should reflect this by identifying and consulting interested and affected parties in the neighbouring countries. The assistance of Department of Environmental Affairs (DEA) may be sought to make contact with counterparts in the neighbouring countries;

- While public consultations in the manner prescribed in the EA Act may not be feasible in the affected countries, it may be possible to obtain their input via the counterparts of DEA in those countries. In view of this an open reporting system through the DEA may be helpful;
- Ensure that concerns raised by the affected country are adequately addressed in the consequent ToR; and
- Seek and obtain all relevant information from the affected countries. The DEA may be helpful in this exercise.

j. Analysis of alternatives:

Proposed investment design, site, technology and operational alternatives should be compared systematically in terms of their potential impacts, capital and recurrent costs, suitability under local conditions and institutional, training and monitoring requirements. To the extent possible, for each of the alternatives (including the 'no action alternative'), the environmental costs and benefits should be quantified and economic values attached where feasible. Alternatives can be grouped under the following headings and will be relevant at the different stages in the project cycle –

- Demand alternatives (for example, using energy more efficiently rather than building more generating plants);
- Activity alternatives (for example, providing public transport rather than increasing road capacity);
- Location alternatives (either for the entire proposal or for the component (for example, the location of the processing plant for a mine);
- Process alternatives (for example, reuse of "waste products" in production, reuse of water, process-optimising and waste reduction, use of more energy or resource efficient processes); and
- Input alternatives (for example, raw material, energy sources).

k. Mitigation measures:

Mitigation is the development of practical measures to reduce adverse impacts on the environment, or to enhance the beneficial aspects of an action. Thus mitigation seeks to –

- find ways of implementing projects with minimum environmental costs;
- minimise or eliminate negative impacts;
- enhance the benefits of a proposal; and
- protect the public and individual rights to compensation.

Feasible and cost-effective measures which will reduce potential environmentally significant impacts to acceptable levels should be proposed including capital and recurrent costs, and institutional and training requirements of those measures estimated. There should be clear responsibility for the proposed actions stated, timelines given for implementing the measures and an estimated cost provided. Mitigation is an encompassing term to denote actions that serve to avoid, reduce or compensate for adverse impacts and promote or increase the beneficial impacts of a project. Elements of mitigation thus include:

- Avoidance-this implies avoiding projects or activities that could result in adverse impacts;
- Minimisation-refers to minimising the degree, extent, magnitude or duration of adverse impacts. Minimising project impacts can be achieved through:
    - project design modification,
    - use of alternative site (location),

- use of alternative raw materials,
- change of production systems, and
- use of cleaner production technologies.

- Rehabilitation-this refers to rectifying adverse impacts by repairing or enhancing the affected resources;
- Restoration- this is an extreme form of rehabilitation and typically requires an extensive engineering of a selected resource to achieve what might be considered original state. It should be borne in mind that once a habitat is destroyed it is extremely difficult to recreate it to the original state;
- Replacement-this is compensation for the loss of a natural resource at a location with the creation or protection of the same natural resource (or one similar in nature), at another location; and
- Compensation-this refers to the awarding of financial or material benefits to people affected by the project (especially those who have lost their homes and livelihoods).

l. Archeological Impact Assessment:

A summary of the findings and recommendations of the Archeological Impact Assessment should be discussed. Reference should be made to the detailed findings and recommendations which should form part of the appendices.

m. Environmental Management Plan (EMP):

An environmental management plan is a tool (document) that represents the actualisation and the administration of the implementation of mitigation measures in all the project phases. Thus an EMP allocates responsibilities, resources and attaches time frames. An important component of the EMP is the monitoring programme to assess progress in the implementation of mitigation measures and compliance of the project to regulations and standards. It is also necessary to have a decommissioning (Remediation and rehabilitation) programme for projects. No matter how long the project lifespan, decommissioning must be considered at the time of project planning. The applicant should address impacts related to the decommissioning phase and a plan for addressing such impacts should be incorporated into the EMP. Thus the EMP will consist of the following components -

- impact mitigation plan;
- monitoring programme;and
- decommissioning programme.

Impact mitigation plan:

The impact mitigation plan should be presented in a manner in which impacts will be managed and for clarity of presentation this should be tabulated. This should, at the minimum contain:

- the phase of the development;
- the activities or processes where impact is likely to emanate;
- the impacts that need to be mitigated;
- the mitigation objectives for each impact;
- the mitigation measures or specific actions required to achieve the mitigation objectives;
- resources required for mitigation;
- estimated costs for mitigation measures; and
- responsibility for implementing mitigation measures.

Monitoring plan:

The consulting team will, on the developer's behalf, design a monitoring plan that is workable. A monitoring scheme for any project is designed to, among other things, check the compliance of the activities of the project against set standards and regulations. Monitoring is also important for checking the performance of the project against set targets. The monitoring plan will enable the project to comply with regulatory requirements as well as help to verify the accuracy of impact prediction. The responsibility of government agencies and developers in implementing the monitoring plan should be outlined. Monitoring should cover both the short term and long term. It is important to point out that the responsibilities of monitoring in the EA Act are assigned to the relevant technical department or local authority. The developer is required by the EA Act to submit an evaluation report on monitoring to the relevant technical department or local authority. The monitoring data will function as an 'early-warning' system indicating if an impact is occurring and allowing action to be taken to remedy the situation if data shows existence of a trend likely to result in an unacceptable impact in the near future.

The monitoring plan should be presented in a manner in which impacts will be monitored and for clarity of presentation this should be tabulated. This should, at the minimum contain:

- phase of the development;
- impact;
- parameter to be monitored;
- source /location of monitoring;
- method of indicating that the mitigation measures have been successful (key performance indicator);
- methods of monitoring;
- responsible agent for monitoring;
- frequency of monitoring;
- reporting mechanism;
- thresholds or existing standards; and
- recommended action if threshold is exceeded

Decommissioning programme:

Different projects have different life spans, some long and some short. Similarly, some projects gradually decommission at the end of their lifespan, but for some decommissioning is sudden and the effects are tremendous. It is essential therefore to incorporate decommissioning in the overall EIA planning process. A decommissioning plan or programme should contain the following as a minimum:

- provide a projected estimate of the life span of the project;
- briefly identify impacts that would result from the decommissioning process and how these would be managed; and
- provide a rehabilitation or restoration plan.

For the purpose of presentation, information on the EMP should be tabulated.

n. Conclusions and recommendations:

Appropriate conclusions should be drawn from the report. It is important to have these conclusions summarised in a series of brief statements referring to relevant sections of the EIA Report. This conclusion should focus on the methodology, significant impacts, the measures proposed to avoid or mitigate them and the impact management proposals for

project implementation. This section should also contain recommendations to the project. Each recommendation should be presented separately and numbered, and should be concise and very clear.

o. References:

The report should have a list of references used in the study. The references should be presented in alphabetical order.

p. Appendices:

Appendices contain information not directly useful in the text of a report but needed for reference or detailed review by technical expects. The list of appendices should include -

- terms of reference for the study;
- sources of data and information;
- all individuals and agencies consulted for specialist information or knowledge used in the report referred to in the text;
- written opinions received from outside specialists;
- field data collection programmes completed during the EIA study;
- findings of the Archeological Impact Assessment;
- detailed data reduced for use in the main body of the report;
- detailed technical analysis of particular impacts (for example, pollution dispersal, soil erosion, demands for social services);
- detailed location plan and technical maps, designs, drawings, photographs, flow diagrams, etc;
- summary of the programme for consulting the public in project planning and assessment, plus a complete record of all parties (stakeholders) consulted and minutes of the meetings;
- names, curriculum vitae and roles of the team members who carried out the study; and
- any other relevant information.

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SCHEDULE 3

(regulation 4)

FEES CHARGED FOR THE PROVISION OF SERVICES

	Service Provided	**Fee**
1	Review of project brief	P10
2.	Review of environmental assessment reports will be related to project cost as follows:	
	Less than P100 000	P 100
	P 100 000 – P499 999	P 250
	P 500 000 - P 999 999	P 500
	P 1 000 000 – P 9 999 999	P 750
	P 10 000 000 – P 49 999 999	P 1 000
	P 50 000 000 or more	P 1 500

Note: Fees for Environmental Impact Statement and Strategic Environmental Assessment Report includes review of Scoping Report and Terms of Reference.

SCHEDULE 4

Form A
(regulation 10(1))

Application for Registration as Environmental Practitioner

APPLICATION FORM FOR MEMBERSHIP AND CERTIFICATION

A. CATEGORY OF APPLICATION

What are you applying for?	General Membership of the Association	
	Certification as an Environmental Practitioner	

BEAPA | Quality, Ethics and Sustainable Development
Botswana Environmental Assessment Practitioners Association

B. ENVIRONMENTAL PRACTIONER APPLICATION

This part should be filled only by applicants for certification. Please read guidance notes on requirements for cetification attached at the back of the application form.		
What level of Certification are you currently at? (There are four levels. EAP stands for Environmental Assessment Practitioner)	None	
	Trainee EAP (No experience)	
	EAP	
	Senior EAP	
	Principal EAP	
What level of Certification are you applying for?		
	Trainee EAP	
	EAP	
	Senior EAP	
	Principal EAP	
What is the status of your current membership?	New/None	
	Active (in Good Standing)	
	Suspended	
	Facing Disciplinary Action	
	Expelled	
	Other (Specify)	

C. PERSONAL DETAILS

NAMES AND SALUTATION			
SURNAME	FIRST NAME	MIDDLE NAME	TITLE (Mr/Mrs/Ms/Dr/Prof
IDENTITY, NATIONALITY & GENDER			
OMANG/PASSPORT NO:	COUNTRY OF CITIZENSHIP	COUNTRY OF RESIDENCE	SEX (Tick) Male ☐ Female ☐
ADDRESSES			

POSTAL ADDRESS	PHYSICAL ADDRESS (Home)	PHYSICAL ADDRESS (Work)

TELEPHONE & EMAIL CONTACTS			
TELEPHONE NUMBER	CELL PHONE NUMBER	ALTERNATE CELL NUMBER	EMAIL ADRESS(ES)

D. TERTIARY EDUCATION AND QUALIFICATIONS

TERTIARY EDUCATION AND QUALIFICATIONS (Minimum of 1 year duration)		
College/University Attended	Dates Attend (From YYYY to YYYY)	Title of Study Programme (Qualification Received)

SHORT COURSES/TRAINING PROGRAMMES (Less than 1 year duration)		
College/University Attended	Dates Attend (Duration (From YYYY to YYYY)	Title of Course (Award)

E. EMPLOYMENT RECORD (HISTORY)

Dates		**Duration (in Months)**	**Type of Employment**		**Employing Organisation (Name, Location)**	**Title of Position Held**	**% of Time on Position**
Start	Finish		Full Time	Part Time (Temporary, Internship etc)			

DECLARATION BY APPLICANT

I..... (names of applicant) declare that the information I have provided above is true and correct. I am aware that any false declaration, if discovered, may result in refusal of my membership of the Association or its cancellation if already approved by the Board. I am also aware that the Board reserves the right to take further legal action against me as deemed necessary on account of a false declaration.

....

SIGNATURE OF APPLICANT DATE

Form B
(Regulation 10(2))

QUALIFICATIONS AND CRITERIA FOR CERTIFICATION OF ENVIRONMENTAL ASSESSMENT PRACTITIONERS (EAP):

The criteria to be used to assess applications for registration and certification in all levels includes: qualifications in an environmental discipline; applicants must demonstrate that they have been predominantly involved in relevant Environmental Assessment (EA) work experience; and for higher level categories, applicants must demonstrate core competencies in EA.

Detailed below are the qualifications and criteria for certification by the Botswana Environmental Assessment Practitioners Association (BEAPA) Certification Board.

1. Education and experience required per category of certification

Proposed Category of EAP	**Tertiary qualification from a recognised university in an environmental discipline**	**Relevant working experience in EIAs at required level of competency (see below)**
Trainee EAP	Diploma, or Bachelor's Degree, or Graduate Degree	No experience
EAP	Diploma, or Bachelor's Degree or Masters Degree	3 years 2 years 1 year
Senior EAP	Diploma or Bachelor's Degree or Masters Degree or Doctorate Degree	5 years 4 years 3 years 2 years
Principal EAP	Diploma or Bachelor degree or Masters Degree or Doctorate Degree	10 years 10 years 6 years 5 years

2. Core competencies:

The issues considered to constitute core competencies include: holistic thinking; analytical skills; integration and synthesis of biophysical and socio-

economic issues; alternatives analysis; competence in each phase of the EA process; application of the principles of sustainable development; understanding of relevant legal and policy requirements; project management skills; subcontracting and management of specialists; communication skills; and reviewing.

The methods by which core competencies are assessed by the Certification Board differ with the levels of certification categories and these are outlined below:

(a) Trainee EAP

- Certificates
- CV
- Referee'reports

(b) Environmental Assessment Practitioner (EAP)

- Structured Interview
- CV
- Referees' reports
- Diploma/Bachelors degree/Post-graduate certificates

(c) Senior EAP

- Structured Interview
- EA reports
- CV
- Referees' reports
- Diploma/ Bachelors degree/Post-graduate certificates

(d) Principal EAP

- Structured Interview
- EA reports
- CV
- Referees' reports
- Diploma/ Bachelors degree/Post-graduate certificates
- Other (research papers or presented papers on EA related issues)

3. Upgrade of Categories:

Registrants may wish to upgrade to a higher level once they have attained the necessary experience and personal attributes and skills. To do this the applicant will be required to submit:

(a) a covering letter stating their intention to upgrade and to which level;
(b) log-sheets detailing any EA work they have completed since they first applied to the scheme;

(c) a revised personal statement; and
(d) portfolios of work and/or a briefing summary depending on level being applied for.

The upgrade will be considered as a new application and will be charged accordingly.

4. Certification Process:

The certification process will be as outlined below:

- Applicants must apply for certification using the appropriate application form, depending on the category being applied for;
- Forms will be available on a website, or may be requested in writing or by phone or fax from the Secretary of the Board;
- The forms must be accompanied by a comprehensive CV, referees' reports and other documentation as required for the category being applied for;
- The confidential reports from 3 referees: one academic, one professional EAP and one client must be submitted independently;
- The application must be accompanied by a fee, which will be non-refundable in the event that the application fails. The application fee will also include the first year's registration fee if the application is successful;
- Applications must be submitted at least 2 weeks before the *monthly/quarterly/bi-annual* Board review meeting to the Secretary by email, fax, post, courier or personal delivery;
- The Board will review applications strictly in the order received;
- The applicants will receive a response no more than 2 weeks after the Board review meeting;
- Successful applicants will be issued with a formal certificate and can place letters (to be determined) signifying that they are certified EAPs behind their name;
- An applicant can appeal to the High Court if his or her application is rejected by the Board;
- An EAP must re-apply to move up to the next category of certification; and
- Continuous Professional Development (CPD) and renewal every 2 years.

5. Continuous Professional Development:

Practitioners who have been registered should develop their personal attributes and skills by:

- Ensuring that their knowledge of environmental assessment techniques is current best practice;
- Ensuring that their knowledge of environmental laws, regulations and procedures is current;
- Undertaking refresher training where necessary; and

- Ensuring that their experience in the execution of relevant EA work is current and maintained.

All registered individuals are required to keep a log of relevant experience and training, which must either be signed-off by their employer or client, or be substantiated by documentary proof.

Log-sheets must be submitted to the Secretary of the Board on an annual basis at the time of renewal of registration or upon request. These will be assessed on a three yearly basis. Failure to demonstrate sufficient relevant EA work may result in the removal of the individual from the register.

The aim of continuing professional development (CPD) is to ensure that EAPs are suitably informed of trends and developments in environmental assessment, including the legal requirements, policy objectives, EA procedures and tools.

There should be a reporting interval of every 2 years, where certified EAPs will be required to submit a CPD report, setting out their achievements in terms of: conference attendance, presentation of papers, submission of papers to refereed journals, seminar and workshop attendance and course completion.

The appropriate type of CPD per EAP category and a working definition of CPD requirements per EAP category is outlined in the Table below. Note that the number of actions is based on a reporting interval of 2 years.

CPD Requirements to Maintain Registration as an EAP

(Trainee EAP is not required to maintain a CPD)

CPD element	EAP	Senior EAP	Principal EAP
Conferences	Attendance at a minimum of 1 conferences in the SADC region	Attendance at a minimum of 2 conferences in the SADC region with presentation of a paper at 1 of these	Attendance at a minimum of 1 conferences in the SADC region and 1 international conference (outside SADC), with the presentation of a paper at 2 of these.
Courses	Attendance at a minimum of 2 EA-related courses run by an accredited institution or person	Attendance at a minimum of 1 EA-related course run by an accredited institution or person	Presentation of a minimum of 1 accredited EA-related course
Seminars and lectures workshops	Attendance at a minimum of 2 EA-related seminars, lectures or workshops	Attendance at a minimum of 2 EA-related seminars, lectures or workshops and presentation of at least 1 seminar, lecture or workshop on an EIA-related topic	Attendance at a minimum of 1 EA-related seminar, lecture or workshop and presentation of at least 2 seminars, lectures or workshops on an EIA-related topic
Published Papers	N/A	Publication of at least 1 paper in a non-refereed journal on an EA-related topic	Publication of at least 1 paper in a refereed journal on an EA-related topic and 1 paper in a non-refereed journal on an EA-related topic

Form C
(regulation 10(3) and 11)

FEE STRUCTURE

Registration Fees

	Initial registration fee (P)
Citizen of Botswana	250
Resident of Botswana	500
Non-resident	1 000

Annual Subscriptions

	Annual Subscription (P)
Citizen of Botswana	500
Resident of Botswana	1 000
Non-resident	1 500

Certification Fee

	EAP	**Senior EAP**	**Principal EAP**
Citizen of Botswana	500	1 000	1 500
Resident of Botswana	1 000	1 500	2 000
Non-resident	2 000	1 500	2 500

Tariff of Professional Fees

Category of Practitioner	**Minimum daily rate (P)**	**Maximum daily rate (P)**
EAP	1 600	2 600
Senior EAP	2 600	3 500
Principal EAP	3 500	5 000

Form D
(regulation 11)

Certificate of Practice for Environmental Practitioners

BEAPA | Quality, Ethics and Sustainable Development

Botswana Environmental Assessment Practitioners Association

Certificate of Practice

We the undersigned certify that by virtue of the authority vested in the BEAPA Board (constituted under section 20 of the EA Act No. 10 of 2011),

_____(Name)

has fulfilled the requirements for cerification to practice as a
……..(BEAPA Title)

This Certificate is valid from MM/DD/YYYY to MM/DD/YYYY

BEAP

_____ _____
Board Chairperson Date

_____ _____
Board Secretary Date

This certificate Number YYYY0000 is the property of the Botswana Environmental Practitioners Association Board and is issued unaltered. Certificate classes are: 1) Trainee Environmental Practitioner 2) Environmental Practitioner; 3) Senior Environmental Practitioner; 4) Principal Environmental Practitioner

(BACKSIDE OF CERTIFICATE)

The certification of the association has at present four levels, each with a certain level of competence and right to submit EIA documents to the Department of Environmental Affairs, as follows:

Education and experience required per category of certification

Proposed Category of EAP	**Tertiary qualification from a recognised university in an environmental discipline**	**Relevant working experience in EIAs at required level of competency (see below)**
Trainee EAP	Diploma, or Bachelor's Degree, or Graduate Degree	Little or no experience
EAP	Diploma or Bachelor's Degree or Masters Degree	3 years 2 years 1 year
Senior EAP	Diploma or Bachelor's Degree or Masters Degree or Doctorate Degree	5 years 4 years 3 years 2-3 years
Principal EAP	Diploma or Bachelor's Degree or Masters Degree or Doctorate Degree	10 years 10 years 6 years 5 years

Form E

(regulation 12)

Register of Environmental Practitioners

BEAPA REGISTER OF ENVIRONMENTAL ASSESSMENT PRACTIONERS

BEAPA SERIAL NUMBER	SURNAME	FIRST NAMES	TITLE (Prof/Dr/ Mr/Mrs/Ms	SEX (Male/ Female)	CITIZENSHIP	OMANG/ PASSPORT No.	POSTAL ADDRESS	PHYSICAL ADDRESS (Residential) Not accessible to the public for security reasons	PHYSICAL ADDRESS (Work)	Telephone, Cellphone & Fax Numbers	Email Address	APPLICABLE TERTIARY QUALIFICATION	CURRENT CERTIFICATION LEVEL (e.g. Trainee EAP, EAP, SEAP, PEAP)	MEMBERSHIP STATUS (Active, Suspended, Disciplinary Action, Expelled)

Form F
(regulation 13(1))

CODE OF CONDUCT OF PRACTITIONERS REGISTERED UNDER THE ACT

Environmental Assessment Practitioners shall carry out their professional activities, as far as possible, in accordance with emerging principles of sustainable development, the highest standards of environmental conservation and quality, and in compliance with the letter and intent of relevant environmental legislation.

i. Environmental Assessment Practitioners shall at all times place the integrity of the environment, including conservation and sustainable use of the biophysical environment and the social welfare, health and safety aspects of the socio-economic environment, above any commitment to sectional or private interests.

ii. Environmental Assessment Practitioners shall ensure the incorporation of environmental considerations from the earliest stages of project conception or policy development.

iii. Environmental Assessment Practitioners shall not conduct professional activities in a manner involving dishonesty, fraud, deceit, misrepresentation or bias.

iv. Environmental Assessment Practitioners will clearly differentiate between facts and opinions in their work.

v. Environmental Assessment Practitioners will, to the best of their ability, keep informed of advances in environmental assessment practice, and will integrate such knowledge into their professional activities.

vi. Environmental Assessment Practitioners will inform a prospective client or employer of any professional or personal interests which may impair the objectivity of their work.

vii. Environmental Assessment Practitioners will not seek employment, grants or gain, or attempt to injure the reputation or opportunities for employment of another environmental assessment practitioner by false, biased or undocumented claims or accusations, by any other malicious action, or by offers of gifts or favours.

viii. Environmental Assessment Practitioners will, to the best of their ability, use the best available information.

ix. Environmental Assessment Practitioners should take responsibility for the findings of the environmental assessment. (However, the Environmental

Assessment Practitioners cannot be held responsible for decisions made by other parties, purportedly based on the findings of the environmental assessment.)

x. Environmental Assessment Practitioners must only undertake particular environmental assessment work in a position of responsible charge where they have the relevant expertise and experience to undertake that work competently.

xi. Environmental Assessment Practitioners shall not advertise their professional services in a self-laudatory manner that may discredit the profession.

xii. Environmental assessment practitioners shall not misrepresent or allow or permit misrepresentation of their own or their associates' academic or professional qualifications, or exaggerate their degree of responsibility for any work of a professional nature.

xiii. When requested to submit tender proposals, Environmental Assessment Practitioners shall structure any offer in such a way as to enable them to discharge their responsibilities to the client in every respect.

xiv. Environmental Assessment Practitioners shall not review for a particular client the work of another Environmental Assessment Practitioners except with the prior knowledge of such person and affording such person reasonable opportunity to submit comments on the findings of the review.

xv. Environmental Assessment Practitioners shall comply with the objectives of the Board as well as any by-laws or rules laid down by such Board.

MADE this day of , 2012.

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ONKOKAME KITSO MOKAILA
Minister of Environment, Wildlife and Tourism